

## **REMARKS/ARGUMENTS**

Reconsideration of this application is requested. Claims 1-13 and 15-17 are in the case.

### **I. INTERVIEW**

At the outset, the undersigned wishes to thank the Examiner (Mr. Kastler) for discussing the present case. The interview was conducted on January 30, 2006, and the courtesies extended by the Examiner were most appreciated. An outcome of the interview the suggestion that declaration evidence be presented in which the prior art and the present invention are discussed and compared. Pursuant to that suggestion, attached is a declaration executed by Lou Carolla, a co-applicant of the present application. The substance of the interview will be clear from the comments presented below.

### **II. CLAIM OBJECTIONS**

Insert A

### **III. THE OBVIOUSNESS REJECTION**

Insert B

As claimed, the present invention is directed to a liner for a ladle and a ladle containing the liner. The liner comprises a body of refractory material defining a hollow interior, the body having a continuous sidewall bounding the hollow interior, a lower closure floor and an open top. A barrier of refractory material faces an interior surface

of part of the sidewall and is spaced inwardly therefrom in the hollow interior. The barrier extends from at or near the open top of the body towards the lower closure floor to define, with the facing part of the sidewall, a spout for discharging molten metal, in use, from the interior of the ladle. The barrier has two longitudinal edge surfaces. Two facing inner portions of the sidewall are extended inwardly, and the longitudinal edge surfaces of the barrier are received at the inwardly extended portions respectively, thereby positioning the barrier at the inward spacing from, and facing, the interior surface of part of the sidewall. The liner has a cylindrical or truncated cone shape outer surface and the spout does not extend outwardly of the outer surface of the liner. Basis for this latter feature appears in previously submitted claim 20 (now canceled without prejudice), and in the penultimate line of page 2 of the specification. No new matter is entered. In addition, the total number of claims in the application has been reduced, and no new issues are raised. Based on this, it is believed that the claims as amended should be entered and considered. Such action is respectfully requested.

Referring to the attached Carolla declaration, Mr. Carolla states that the invention has a number of distinct features and benefits, including two facing inner portions of the sidewall extending inwardly and a barrier received at the inwardly extended inner portions of sidewall. Mr. Carolla notes that because of the liner structure, the liner can be easily accommodated in a cylindrical or truncated cone-shaped ladle without modification. Mr. Carolla comments that this satisfies a long-standing problem with such lined ladles.

Mr. Carolla further states that ceramic-refractory tiles are both expensive and they chill the metal, i.e., they are less insulating than the ladle lining material. The

present invention allows the use of smaller tiles, which if manufactured in a conventional refractory, will have reduced cost and reduced chilling effect on the metal.

Looking at Figures 1-3 of the application, Mr. Carolla notes that Figure 1 is an example of a prior art arrangement having large tile 10 extending across the liner. Mr. Carolla states that, in his experience, large tiles of this type are prone to fracture, and may potentially introduce unwanted gas into the metal. In addition, they may have a chilling effect on the molten metal.

Referring to Figure 2, Mr. Carolla states that this shows a curved barrier embedded within grooves in the sidewalls. Mr. Carolla adds that, in his experience, this type of barrier tends to crack due to uneven stresses in the barrier due to its curvature.

With reference to Figure 3, Mr. Carolla observes that this shows a barrier made from refractory or ceramic tile, but the spout is formed by curving the sidewall of the liner outwards beyond the external circumference of the liner and extending the extension downward by the whole length of the liner. Mr. Carolla notes that, in his experience, this type of ladle does not easily fit into any shape of ladle, i.e., the ladle would need to be modified to fit the liner or the liner designed/modified for each different ladle. Mr. Carolla concludes by stating that the problems associated with the prior designs as discussed above are overcome by the present invention which can readily fit into existing ladles.

In light of the above, it is clear that one of ordinary skill would not have been motivated to arrive at the presently claimed invention based on the prior art discussed in the present application. Absent any such motivation, it is clear that a *prima facie* case

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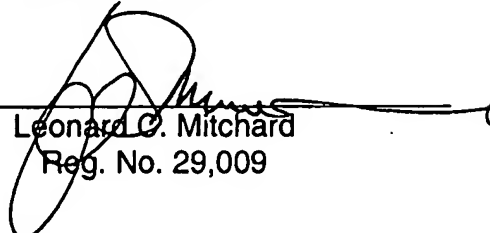
of obviousness has not been generated in this case. Reconsideration and withdrawal of the outstanding obviousness rejection are accordingly respectfully requested.

Favorable action on this application is awaited.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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